PATENT
Docket No.: 58493US003

32692
Customer Number

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	MARTIN G. HARTUNG AND MICHAEL KELLER		
Application No.:	10/828,656	Confirmation No.:	4923
Filed:	April 21, 2004	Group Art Unit	2838
Title:	PREVENTION OF ELECTRO-CHEMICAL CORROSION AT CHARGING CONTACTS OF A BATTERY-POWERED HANDPIECE AND ITS CHARGER DEVICE		

BRIEF ON APPEAL

Mail Stop: Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR § 1.8(a)]

I hereby certify that this correspondence is being:

☐ deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

☐ transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at 571-273-8300.

☒ transmitted to theUnited States Patent and Trademark Office on the date shown below via the Office electronic filing system.

May 21, 2007
Date

Signed by: Judy L. Hansen

Dear Sir:

This is an appeal from the Office Action mailed on December 29, 2006, in light of the Advisory Action mailed March 5, 2007, finally rejecting claims 32-50.

☐ Please charge the fee provided in 37 CFR § 41.20(b)(2) to Deposit Account No. 13-3723. One copy of this sheet marked duplicate is also enclosed.

☒ Any required fee will be paid at the time of EFS-Web submission.

☒ If necessary, charge any required fee, or credit any overpayment to Deposit Account No. 13-3723.

A Notice of Appeal in this application was electronically submitted on March 27, 2007.

Appellants request the opportunity for a personal appearance before the Board of Appeals to argue the issues of this appeal. The fee for the personal appearance will be timely paid upon receipt of the Examiner's Answer.

REAL PARTIES IN INTEREST

The real party in interest is 3M ESPE AG, a wholly-owned affiliate of 3M Company (formerly known as Minnesota Mining and Manufacturing Company) of St. Paul, Minnesota, and its affiliate 3M Innovative Properties Company of St. Paul, Minnesota.

RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

STATUS OF CLAIMS

Independent claims 32 and 36, and dependent claims 33 through 35 and 37 through 50 are pending, and have all been the subject of a final rejection. Claim 46 was objected to as being in improper form in the Office Action that included a final rejection of the other pending claims, and was not further treated on the merits by the Examiner.

STATUS OF AMENDMENTS

Appellants filed an Amendment and Response Under 37 C.F.R. 1.116 on 21 February 2007. In an Advisory Action dated 5 March 2007, the Patent Office indicated that the Amendment would not be entered.

SUMMARY OF CLAIMED SUBJECT MATTER

The claims at issue concern the prevention of electro-chemical corrosion associated with charging contacts of a battery-powered handpiece or a charger device associated with such a handpiece. In particular, the claims recite a sensing contact or sensing pin for detecting current flow between two contacts of the handpiece, or the charger device, respectively.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Are claims 32 and 36 anticipated under 35 U.S.C. 102(b) by U.S. Patent No. 5,861,729 (Maeda et al.)?

ARGUMENT

The only rejection of independent claims 32 and 36 is under 35 USC § 102(b) as being anticipated by U.S. Patent No. 5,861,729 (Maeda et al.). Because claims 32 and 36 are patentable over Maeda et al. for at least the reasons presented below, those claims and all of the remaining (dependent) claims are in condition for allowance. Reversal of the Examiner's rejection of claims 32 and 36 and a confirmation of the allowability of all of the pending claims (subject to the resolution of certain outstanding objections to the claims) is respectfully requested.

Claims 32 and 36 read as follows:

32. Battery-powered handpiece, comprising a sensing contact for detecting current flow between a first charging contact, for connection to a first contact of a battery, and a second charging contact, for connection to a second contact of a battery.

36. Charger device for a battery-powered handpiece, comprising a sensing pin detecting current flow between a first charging pin and a second charging pin.

The Examiner rejected these claims over Maeda et al., which relates generally to a charger for portable equipment, in which the charger has circuitry that permits it (among other things) to distinguish between two different types of batteries. The Examiner indicated in the Office Action dated December 29, 2006 that included a final rejection of all pending claims, that:

> *"Regarding Claim 32, Maeda et al. disclose in Figures 1 and 2, a battery powered handpiece, comprising, a sensing contact (28) for detecting a current flow between a first charging contact (24), for connection to a first contact of a battery (8), and a second charging contact (26), for connection to a second contact of a battery (10).*
>
> . . .

Regarding Claim 36 Maeda et al. disclose in Figure 1-3, a sensing pin (28) detecting a current flow between the two charging pins, 10 and 12, [and] is sensed by the current detector."

Office Action at page 8 (ellipsis and bracketed text added by Applicants' representative for clarity).

As an initial matter, the features attributed by the Examiner to the "battery powered handpiece" in Maeda et al. (28, 24, and 26) are not part of a battery-powered handpiece at all. They are part of a charger 20. Similarly, the features identified in Maeda et al. in regard to the charger device of claim 36 are not a part of a charger device in Maeda et al. They are part of the handpiece 2. For those reasons alone, Maeda et al. does not anticipate claims 32 and 36, and the rejection of those claims should be reversed. However, Applicants will continue the analysis on the basis that the referenced parts were inadvertently reversed, because the present invention is patentable even over the corresponding handpiece and charger disclosed Maeda et al.

Comparing the structural features of the handpiece and the charger disclosed in Maeda et al. to the inventions of claims 32 and 36 demonstrates that those claims are novel. That is because the auxiliary terminal 12 of the portable telephone 2 in Maeda et al. does not detect current flow between charging terminals 10 and 8, as required in claim 32. What that terminal does do is to provide a connection or electrical contact between the telephone 2 and the charging unit 20. There is no disclosure in Maeda et al. suggesting that the auxiliary terminal is a sensing contact for detecting current flow between terminals 8 and 10 in Maeda et al. Because Maeda et al. does not disclose the subject matter of claim 32, including specifically a sensing contact for detecting current flow between first and second charging contacts, claim 32 is patentable under 35 U.S.C. 102(b) over Maeda et al. Reversal of the final rejection of that claim is therefore respectfully requested.

Similarly, the auxiliary terminal 28 of the charger 20 of Maeda et al. does not detect current flow between charging terminals 24 and 26, as required in claim 36. That auxiliary terminal provides the electrical connection point on the charging unit 20 that corresponds to the auxiliary terminal 12 on the telephone 2. Auxiliary terminal 28 does not sense or detect current flow between charging terminals 24 and

26. Accordingly, Maeda et al. also does not disclose the subject matter of claim 36, including specifically a sensing pin detecting current flow between first and second charging pins, and claim 36 is patentable under 35 U.S.C. 102(b) over Maeda et al. Reversal of the final rejection of claim 36 is therefore respectfully requested.

Although no obviousness rejection was raised in regard to claims 32 and 36 over Maeda et al. either individually or in combination with any other prior art of record, Applicants respectfully submit that there is no motivation to modify the devices disclosed in Maeda et al., or to combine them with other prior art of record, to arrive at the claimed invention.

Because independent claims 32 and 36 are in condition for allowance for at least the reasons noted above, dependent claims 33 through 35, and 37 through 50, are similarly in condition for allowance. Certain objections raised in regard to claims 36, 39, and 46 can be addressed upon remand.

CONCLUSION

For the foregoing reasons, Applicants respectfully request that the Board reverse the final rejection of claims 32 and 36 under 35 U.S.C. 102(b) over Maeda et al., reverse or vacate as moot the rejection of the remaining dependent claims, and return the application to the Examiner with a confirmation of the patentability of the pending claims over the prior art of record.

Respectfully submitted,

18 May 2007
Date

By: _____
Peter L. Olson, Reg. No.: 35,308
Telephone No.: 651-736-4050

#294052 - 58493US003 Appeal Brief
Office of Intellectual Property Counsel
3M Innovative Properties Company
Facsimile No.: 651-736-3833

CLAIMS APPENDIX

1-31. (Canceled).

32. (Previously presented) Battery-powered handpiece, comprising a sensing contact for detecting current flow between a first charging contact, for connection to a first contact of a battery, and a second charging contact, for connection to a second contact of a battery.

33. (Previously presented) Battery-powered handpiece according to claim 32, further comprising a magnet co-operating with a magnetically activatable switch arranged in a charger device, for initiating a charging operation once the battery-powered handpiece is electrically connected to said charger device.

34. (Previously presented) Battery powered handpiece according to claim 33, wherein said magnet is arranged in proximity to the housing of the handpiece.

35. (Previously presented) Battery-powered handpiece according to claim 32, further comprising a diode located between said first charging contact and said first contact of said battery for allowing charging current to flow from said first charging contact into said battery but preventing current flow in opposite direction.

36. (Previously presented) Charger device for a battery-powered handpiece, comprising a sensing pin detecting current flow between a first charging pin and a second charging pin.

37. (Previously presented) Charger device according to claim 36, further comprising a warning means for giving a warning signal if current flow between said first and second charging pins is sensed by said sensing pin.

38. (Previously presented) Charger device according to claim 37, wherein said warning means provides an acoustic and/or optical warning.

39. (Currently amended) Charger device according to claim 36, wherein said sensing pin of said charger device is in contact with a sensing pin at said handpiece if said handpiece is connected to the charger device so that said sensing pin at said charging device further detects current flow between ~~said~~

first and second charging contacts of said handpiece, said current flow having a potential for initiating an electrochemical reaction.

40. (Previously presented) Charger device according to claim 36, further comprising an electronic switch connected to said sensing pins of said charger device for disconnecting a charging voltage applied to said first and second charging pins if current flow is sensed by said sensing pin.

41. (Previously presented) Charger device according to claim 36, further comprising a detector for detecting the presence or absence of said battery-powered handpiece and a switch for switching on/off the charging voltage dependent on detection of the presence/absence of said handpiece.

42. (Previously presented) Charger device according to claim 41, wherein said switch is selected from the group comprising mechanical switches, optical switches, electro-mechanical switches, electro-optical switches or magnetic switches.

43. (Previously presented) Charger device according to claim 42, wherein the magnetic switch comprises a magnetically activatable switch being operable in response to a magnet arranged in said handpiece.

44. (Previously presented) Charger device according to claim 43, wherein said magnetically activatable switch comprises a Reed switch.

45. (Previously presented) Charger device according to claim 41, said switch allowing a charging voltage to be applied to said charging pins in the presence of said handpiece.

46. (Currently amended) In combination, a battery powered handpiece according to claim 32 and a charger device ~~according to claim 36~~ comprising a sensing pin detecting current flow between a first charging pin and a second charging pin, wherein the first charging pin is adapted for electrical connection to the first charging contact of the handpiece, and the second charging pin is adapted for electrical connection to the second charging contact of the handpiece.

47. (Previously presented) Battery-powered handpiece according to claim 32, wherein said handpiece is a dental tool.

48. (Previously presented) Battery-powered handpiece according to claim 47, wherein said dental tool is dental curing light.

49. (Previously presented) Charger device according to claim 36 adapted for use with a dental tool.

50. (Previously presented) Charger device according to claim 49, wherein said dental tool is dental curing light.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.